



Delhi Public School, Howrah

PERIODIC ASSESSMENT – II (2024-2025)

Class – IX

Care must be taken not to write anything on the question paper. All the questions must be attempted in the correct sequence.

SUBJECT: ARTIFICIAL INTELLIGENCE (SUBJECT CODE 417)

THEORY EXAMINATION

Time Allowed: -2 Hours

F.M.-50

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **21 questions** in two sections: Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 2 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):**
 - i. This section has 05 questions.
 - ii. Marks allotted are mentioned against each question/part.
 - iii. There is no negative marking.
 - iv. Do as per the instructions given.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
 - i. This section has 16 questions.
 - ii. A candidate has to do 10 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q. 1	Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)	
i.	Intrapersonal Communication takes place- a. Between two individuals b. In our mind c. In a small group d. In public speaking	(1)
ii.	Being a good listener is a trait of _____. a. Interest b. Ability c. Self-confidence d. Self-control	(1)
iii.	Body Language is a part of the _____ communication process. a. Oral b. Verbal c. Non-Verbal d. Visual	(1)
iv.	_____ is called the primary memory or main memory of a computer. a. Cache memory b. Hard Disk c. RAM d. SMPS	(1)
v.	_____ is a collection of raw and unorganized facts. a. Data b. Information c. Number d. Words	(1)
vi.	_____ uses GPS (Global Positioning System) and helps you find directions to where you want to go. a. Play store b. Windy c. Google Maps d. Rapido	(1)

Q. 2 Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)		
i.	_____ is the first step of an AI Project Cycle, where you have to write about the nature and boundaries of a problem. a. Data Acquisition b. Problem Scoping c. Deployment d. Step-by-step process	(1)
ii.	An autonomous system named _____ was built to diagnose bacterial infections and recommend appropriate antibiotics a. MYCIN b. Shakey c. Roomba d. WABOT-1	(1)
iii.	These engineers are responsible for developing and managing machine learning in AI systems. a. Machine Learning engineers b. Software engineers c. Data Scientist d. Hardware Technicians	(1)
iv.	There are two types of ethical concerns related to the implications of AI systems: privacy concern and _____. a. Adoption concern b. Data Collection c. Decision making d. AI ethics	(1)
v.	Relevant and Reliable data always works on _____ principle. a. GIGO b. FIFO c. LIFO d. SDMO	(1)
vi.	A _____ is basically a tool that helps us in making decisions and actions in complex situations. a. Choropleth Graph b. System Graph c. System Map d. Concept Map	(1)

Q. 3 Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)		
i.	Fill in the Blank: _____ is used for the design, development, analysis and visualization of processed data.	(1)
ii.	Which is the last step of the AI Project Cycle? a. Data Acquisition b. Surveys c. Problem Scoping d. Deployment	(1)
iii.	The _____ block helps us in determining the nature of the problem. a. What? b. Where? c. Who? d. Which?	(1)
iv.	Which of the following is the best platform to deal with Big Data? a. MapReduce b. C c. Qbasic d. LOGO	(1)
v.	Which of the following elements is not a part of sustainable development? a. Society b. Environment c. Technology d. Ecosystem	(1)
vi.	State whether the following statement is TRUE or FALSE. Rewrite the correct statement if false: The training data should always be relevant and reliable.	(1)

Q. 4 Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)		
i.	When you have a lot of datasets about a particular topic, you need to visualise it for understanding its _____. a. Pattern b. Trends c. Strategy d. All of these	(1)
ii.	Fill in the blank: Without _____, AI systems cannot perform the desired course of actions.	(1)
iii.	In a flexible life cycle, the product is developed over _____. a. Single iteration b. Multiple iteration c. Fix number of times d. Sequence	(1)
iv.	_____ has been developed by IBM Watson. a. Alexa b. CTM c. Eva d. Smart thermostars	(1)
v.	Fill in the blank: _____ is a service developed by Microsoft that uses the power of NLP to solve the complex problem of extracting meaning from natural language input.	(1)

vi.	The discipline of teaching machines how to see and perceive the human world is known as ____.	(1)
	a. Data Visualization b. Computer Vision c. Data acquisition d. Machine Learning	

Q. 5	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	These systems are hard to develop because replication of the human brain is theoretically possible but not practicable as of now.	(1)
	a. ANI b. ASI c. AGI d. ALI	
ii.	State whether the following statement is TRUE or FALSE. Rewrite the correct statement if false: In Cyberspace, data is analysed and understood through cyber-security solutions.	(1)
iii.	Fill in the blank: Google's AI _____ beat world champion Ke Jie in the board game of Go.	(1)
iv.	A humanoid robot known as the first "Robot Citizen" is called _____.	(1)
	a. Sophia b. Clarke c. Roomba d. Eliza	
v.	Fill in the blank: _____ has caused maximum impact in Business, Banks, Aviation, E-Commerce, Automobile and Healthcare industries.	(1)
vi.	You must have heard the term "Facial reorganization" many times. Identify the technique employed for this.	(1)
	a. Computer Vision b. Machine Learning c. Natural Language Processing d. Image Processing	

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks)

Answer each question in 20 – 30 words.

Q. 6	There are seven C's of effective communication which are applicable to both written as well as oral communication. Discuss any two C's of the seven C's of communications.	(2)
Q. 7	Your positive actions combined with positive thinking results in success. How to instill positive thinking?	(2)
Q. 8	The external appearance is the first thing that people notice about someone. Self-grooming is one of the most important part of personality development. Give any four grooming tips for a job interview.	(2)
Q. 9	ICT has made the whole world a global village by enabling individuals to communicate easily and quickly. Explain the term Global Village in this context.	(2)
Q.10	Seema was asked to gather some information for her school project from Google Chrome web browser. But she doesn't have any idea about web browser. Help her to understand any three common properties of web browsers.	(2)

Answer any 4 out of the given 6 questions in 20 – 30 words each (2 x 4 = 8 marks)

Q.11	"AI systems can be used for beneficial as well as destructive purposes". Justify the statement.	(2)
Q.12	Sourav's teacher gave him an assignment to prepare a presentation on the topic "Machine Learning and Deep Learning". While preparing the assignment, he became confused about the differences between them. Help him to prepare this project with two points of differences between Machine Learning and Deep Learning.	(2)
Q.13	Rita heard a statement that "Data features play an important role while visualising data". Help Rita understand about data visualisation techniques in your own words.	(2)
Q.14	The 4Ws are the easiest questions used to collect information regarding a problem. What are the 4Ws Problem in AI?	(2)
Q.15	Discuss two applications of Machine Learning.	(2)
Q.16	"Committed to build a better future for the people and the planet, the member states of United nations have resolved to achieve the targets of the 17 Sustainable Development Goals (SDGs) by 2030. Describe any two SDGs in your own words.	(2)

Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)

Q.17	Rishikesh wants to connect all the smart devices in his smart home through the Internet. Which devices would he use to do so? Also, write a short note on the two suggested devices.	(4)
Q.18	Anjali was curious to know that “Accuracy and reliability of datasets are very important while developing AI systems”. Assist Anjali in drafting a brief note on it.	(4)
Q.19	Paridhi is confused with the different types of approaches used in AI Data Modeling. Help her by explaining the same.	(4)
Q.20	Soumya has strong mathematical skills and a good knowledge of programming languages. Which career in the field of AI should he choose to pursue and why?	(4)
Q.21	What do you mean by a decision tree? Write two advantages and disadvantages of a decision tree.	(4)